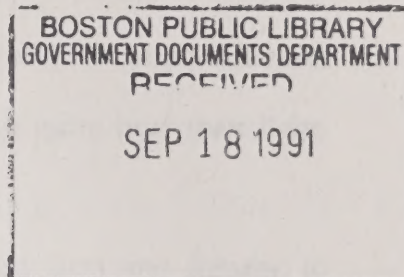


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## Economic Prospects for Boston and the Bay State in the Nineties

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## I. An Overview; Some Facts and Figures<sup>1</sup>

The record performance of Boston and the Commonwealth in the 1980s, followed by the all-too-quick slowdown, and a succession of worrisome concerns, has led to an unprecedented loss of confidence. The pendulum has been broad brush, generating more heat than light, however.

This paper attempts to more objectively marshall the relevant facts and figures, to distinguish between short-term and longer term considerations, to provide a more balanced perspective on the nature of the City and State economy and the outlook for the medium and long-term. A scenario for short-term recovery, and medium and long-term growth is sketched. As short-term factors run their course, recovery is expected in a year's time, followed by significant medium and long-term growth as the extraordinary strengths of the Boston, Metro and State economies take over. Public and private sector leadership will be an essential ingredient. Within this context, Boston will emerge in a front-runner role in view of the urban orientation of new technology industry, and the exemplary performance of City government in fiscal and public policy management.

The achievement of the Bay State economy in the boom years 1982-88, was storybook, but real; personal income growth second highest among the nation's states, per capita income, in 1988, third highest, more than 650,000 net new jobs added, the value of the State's production of goods and services rising at a rate almost twice that for the nation as a whole, along with

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<sup>1</sup> This paper and the one that follows (II. Labor Force Upgrading), are from The Howell Report; Technical Appendix, Volume One, Boston Redevelopment Authority, November 8, 1990.





productivity (gross product per worker). Growth in income, and housing value appreciation, swelled consumer confidence and sales, generating a torrent of revenue growth, making it possible for state government to do many good things, - including expansion of local aid to compensate cities and towns for revenue loss due to Proposition 2 1/2, and the cutback in the flow of federal funds in the Carter-Reagan era.

Massachusetts experienced an extraordinary upgrade of both its economic base and labor force in the 1980s. The State's economic structure blossomed. Employment growth in hi-tech, in the first half of the 1980s, and broader and more sustained growth in health services and medical research, professional and business services, asset management and other aspects of finance, higher education and the hospitality industry, more than offset the loss of low-tech manufacturing jobs. The broadening of the Commonwealth's economic structure was accompanied by an extraordinary enhancement in the quality of the labor force. From 1980 to 1989, 80 percent of the net increase in the State labor force was in professional, managerial and technical personnel. At the same time, there was a significant decline in blue collar occupations while the state's unemployment rate remained relatively low. In effect, the Massachusetts economy of 1988, and its labor force, had advanced notably in quality in the course of the decade.

Reports of emerging weakness in the State economy surfaced in November 1988 and November 1989, with newsletters of the Salomon Brothers investment banking firm, followed by a stream of news stories in the Spring of 1990. The most encompassing reports appeared during the summer of 1990, - an op-ed article, in the Boston Globe of July 20th, by Richard F. Syron and Lynn E. Browne, and a story in the New York Times of July 23rd, by Fox Butterfield. Both articles marshalled and articulated the changing fortune of the regional economy, confirming the arrival of hard times. But there were limitations to the information and analysis

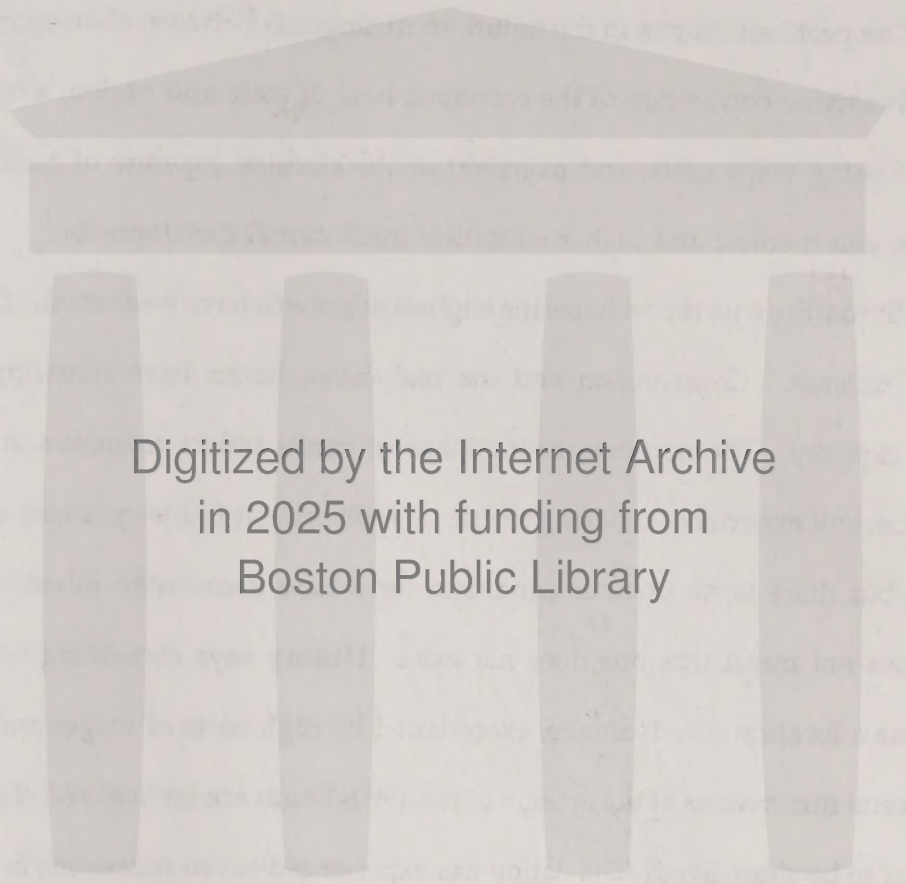




presented, and a recognition of these are important to a better understanding of the future prospects. The problem centers in the failure to distinguish between short-term and long-term factors, a too narrow conception of the economic base of state and region, a misreading of the incidence of rising wage costs, and oversight of the sizeable pipeline of public infrastructure investments, and medical and higher education institutional development.

The Syron-Browne report notes the engines of growth have weakened, - financial services, computers, defense. Construction and the real estate boom have outstripped the region's absorptive capacity. The non-performing loans of banks reflect reduction in collateral value. Only services will experience modest growth. A replacement industry, a new engine of growth, is needed, but there is no obvious candidate for a new knowledge intensive industry. The absence does not mean that one does not exist. History says something will happen. New England has a location disadvantage, exacerbated by high costs of wages and housing.

Several dimensions of the erosion of the 1980s boom are cyclical and short-term, and may be expected to be short-lived. The nation has experienced seven recessions in the 45 years since the end of World War II, and these have ranged from 2 quarters to 6 quarters in duration, as measured by the National Bureau of Economic Research and the U.S. Bureau of Economic Analysis. The current slowdown dates from Fall 1988, and may be expected to extend to the Fall of 1991. Aspects that may be considered short-term include the non-producing loans of the regional banks, the overhang of the inventory of unsold housing, the rise in office vacancies, softening of effective rents, and the ebbing of development construction; also, the curtailment of credit lines of business firms despite exemplary fiduciary performance. Most serious of all was the extended drama of fiscal disarray, pervading through 1989 and 1990, as the executive and legislative branches of state government failed to achieve a timely accord on how to resolve the revenue short-fall, until the belated and controversial revenue package of Summer 1990. An



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unprecedented fall in consumer confidence was matched by the spread of uncertainty in the business community. Sooner or later, the non-producing loans of the regional banks will be written off, and the banks will be back in the business of making money by lending. The overhang of unsold housing is melting rapidly. Office vacancy rates, in Boston, have stabilized for seven quarters now; Boston has the fourth lowest vacancy rate of twenty large cities, and net absorption is increasing. Further remedies to the fiscal situation are high on the agenda of the next governor.

More serious and longer-term are the "structural" weaknesses. Employment in high-technology manufacturing and in defense related industry has been declining since 1986, and, in finance, since 1988. The continued growth in services employment has not prevented the net loss of almost 100,000 jobs in the State, and a further decline of 100,000 is foreseen for 1991. The unemployment rate has risen above the national average, to 6+ percent.

But Boston and Massachusetts 1990 are not the economies of the 1970s when unemployment reached 14 percent, in Boston, and 12 percent in the State. The economic base is broader, more growth oriented, and less cyclically sensitive, and the labor force is substantially upgraded. The engines of growth are more than high-tech, defense, and finance. They include health services and medical research, higher education, business and professional services, asset management, the hospitality industry, instruments and computer services, and these are doing well.

Of the Bay State's 3.8 million jobs, the replacement need may be estimated at 300,000 jobs, and half of this is already underway. At peak, employment levels were 300,000 in high-tech manufacturing, 80,000 in defense, and 312,000 in finance. Job losses 1989-91 are not likely to exceed one-third of these levels.

The replacement industries would emerge from those growth technology sectors where



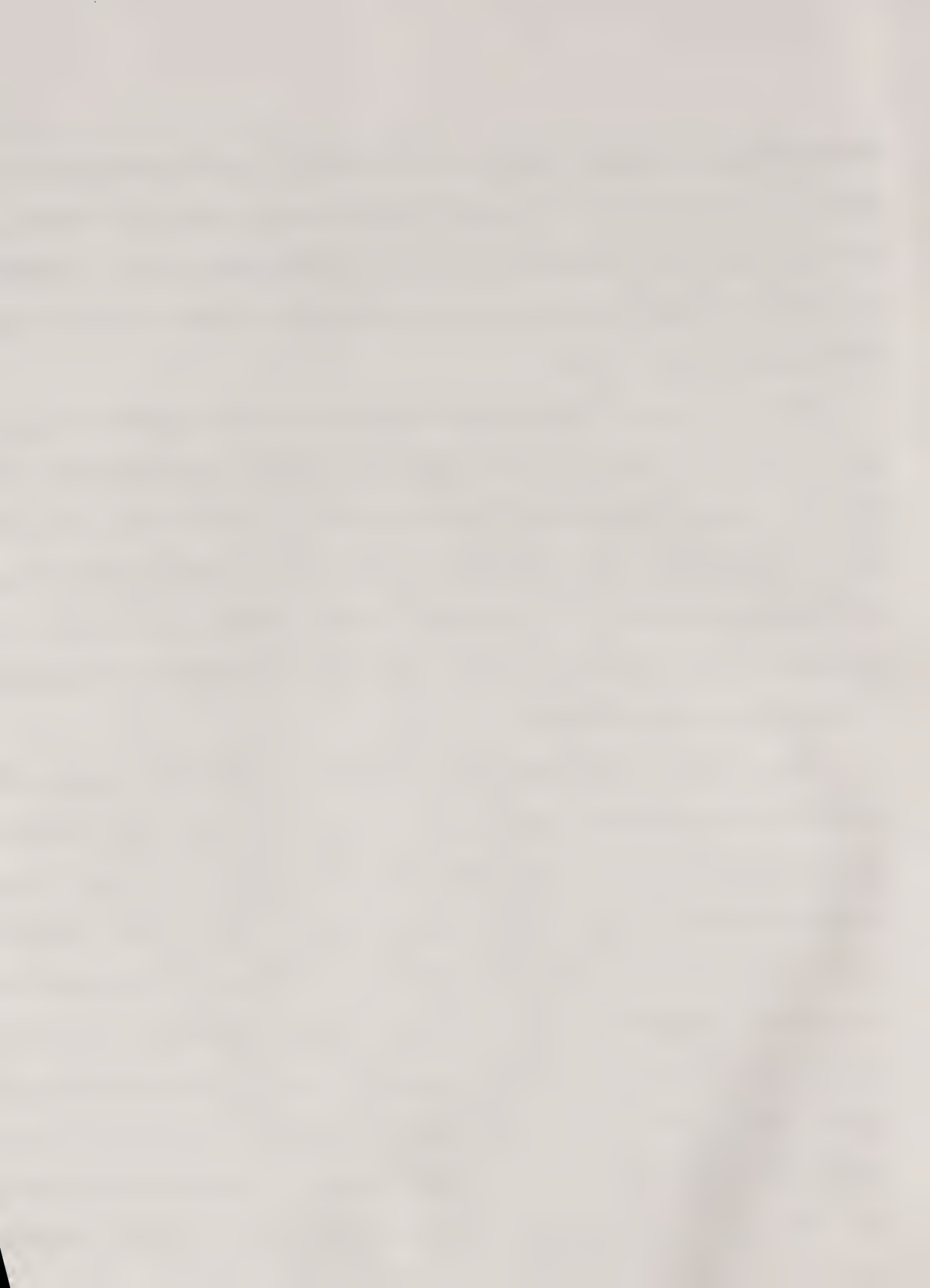


Boston and the Bay State have the advantage of outstanding competitive specialization. These include national industries with high rates of projected growth in which Boston and the Bay State have a large relative concentration. Drawing on these prognoses, a growth of 175,000 net new jobs are forecast in health services and medical research, computer services, instruments, biotechnology and pharmaceuticals.

The role of costs as a location disadvantage should be seen in perspective. Wage costs have risen but remain below that of other principal growth areas. Wage differentials with the South had narrowed in the 1970s and 1980s until about 1987. Housing costs are declining relative to income. High wage costs may explain the 1980s loss of low-tech manufacturing and labor force, but are hardly relevant to the growth industries of Boston and the Bay State, - asset management, health services and medical research, higher education, business and professional services, and the hospitality industry.

The economic base, and growth, of the Boston and Commonwealth economies, will be spurred by an extraordinary pipeline of public infrastructure investment and development projects of the institutions of higher education and medicine. The pipeline of public infrastructure projects, including the megaprojects totals more than \$17 billion. Development projects of the institutions of higher education and medicine total 11 million square feet of construction. Together they represent an important new stage of broadening the economic base and advancing the capacity for new economic growth. This new 90s stage of economic base building follows the sequence of public infrastructure investment of the 1960s and early 1970s based on federal, state and city dollars, the lead role of commercial development in the late 1970s and 1980s, as public dollars, especially federal dollars, ebbed, and as commercial and residential development construction languished in 1989, 1990, and, perhaps 1991.

The broad range of services activities of Boston and the Bay State are continuing to grow,





and will account for more than half of projected job growth in the 90s. There will be a notable difference with the recent past, however. In the 1980s, services activities absorbed the large baby boom labor force bulge, swelling employment, with limited growth in productivity. This contrasted with the extraordinary growth in manufacturing productivity, and was a principal factor in the poor performance of the national economy in terms of productivity growth since 1973. In the 90s the labor force will be older and more productive, and, to accommodate slow growth in the labor force, there will be job restructuring, better education and job training, and automation. The result will be strong productivity gains, advance in real income, and a revenue generation payoff. But for services this will mean output expansion (real gross product) with less than commensurate job gains.

The foregoing analysis of the Boston and Bay State economies suggest a recovery and growth scenario along the following lines. Recovery will emerge as the short-term factors eroding the economy, -fiscal disarray, non-performing bank loans, and the inventory of unsold housing -, run their course and self-correct, with the help of newly emerging public and private sector leadership. Medium and long-term growth will wax strong as the more fundamental elements of the economy take hold, - projected growth in new technology industry, continued growth in services, and the pipeline of public infrastructure investment and development projects of the institutions of higher education and medicine. With almost two years of slowdown already elapsed, recovery is expected in a year's time, by Fall 1991, and long-term growth should be in full swing in 1992.

Medium and long-term growth in the 90s, however will differ from that of the roaring 80s in a number of important respects. Employment growth in the 90s will be more limited because of national demographics, the constraint of the baby bust era. Massachusetts' gain of 1,061,000 jobs in the 12 years, 1976-88, will be followed by an increase of little over a half that,





+564,000, in the 90s. And, whereas the Bay State led in 1980s, it will just match the growth rate in the nation in the 90s. Nevertheless, the Commonwealth will retain its 1988 rank, in the year 2000, among the Nation's states, - 10th in total personal income, 4th in per capita personal income, 10th in total employment, and 13th in population size, according to the U.S. Bureau of Economic Analysis.

The Boston Metro Region will maintain its 70 percent share of Bay State employment growth, and also retain its rank among the 54 metropolitan areas expected to have a population exceeding 1 million by the year 2000. The Boston Metro Region, in the year 2000, will continue to rank 6th largest in total personal income, as in 1988, 6th largest in employment, and 10th in per capita personal income. In population, it will shift from 6th largest, in 1988, to 7th, in the year 2000, all according to an October 1990 report of the U.S. Bureau of Economic Analysis.

Boston, in contrast, will do better in employment, personal income, per capita income, and population growth rates, in the 90s, than the metro region, state, and nation, as a consequence of the growing importance of new technology industry and its significant urban orientation. This favorable evolution of the Boston economy complements the stellar fiscal performance of the City, under the leadership of Mayor Raymond L. Flynn, with 5 bond rating upgrades in 6 years, - 3 by Moody's Investors Service, Inc., and 2 by Standard & Poor Corporation.

In effect, the concentration of talent, advanced economic structure, high productivity performance, drawing on pre-eminent institutions of higher education, medicine, and research, make the Boston, metro-region, and state economies formidable competitors in the global economy. These features put Boston in a special class of world cities looked to as the frontier for new achievement. With this year's awards, the Boston area has garnered 56 Nobel laureates, for example.





## Economic Growth and Structural Upgrading

Upscale economic base broadening led to notable performance of the Boston and Bay State economies in the 1980s.

For the 1990s, following recovery from the 1989, 1990, (and 1991) cyclical slowdown and some key shifts in structure, medium and long-term growth is foreseen, drawing on the expanding role of new technology industry and the continued growth of the broad range of services activities. Employment growth will be smaller, in the 90s, however, but gains in productivity will be larger, with resultant substantial advance in real income and revenue generation. Features of both periods are here summarized.

### 1976-88

The Bay State's record growth of jobs, personal income, per capita income, and productivity, in the 1976-88 period, reflected an extraordinary upgrading of the economic structure of the State, the Boston metro region, and the City. Massachusetts gained 1 million jobs, 1976-88, including more than 650,000, 1982-88, representing increases of 39 percent, and 22 percent, respectively, in comparison with 33 percent and 18 percent, for the Nation, in the two periods.

For Massachusetts, almost two-thirds of the million new jobs were in the broad range of high grade finance and services activities, including asset management, higher education, health services and research, business and professional services, and the hospitality industry. With its



19th century pioneering in institutions of finance and services, the Bay State was able to take full advantage of the revolutionary growth in services activity in the national economy. In 1988, these sectors accounted for 40 percent of the State's jobs total, in comparison with 32 percent in 1976.

The services boom, which took off in the mid-70s, was accompanied by the boom in high-tech and defense related manufacturing which made up 10 percent of the Bay State's jobs at their peak, in 1986.

The concentration and specialization of Boston in services and finance, relative to employment shares in the national economy, is indicated by ratios of 1.5 and 1.9, respectively, in 1988. The finance and services share of Boston employment had risen from 45 percent of total jobs, in 1976, to 56 percent, in 1988.

In a study of 34 large cities, Boston had the highest share of employment in services and finance; San Francisco and New York were second and third highest, respectively.<sup>1</sup> Boston also ranked among the top three in the share of services and finance employment that represented exports.

#### 1988-2000

Upgrading of economic structure would be accentuated, in the 90s, with a lesser growth in employment complemented by a larger gain in productivity, as a consequence of further relative shifts to upscale economic activities, - new technology industry (health services, research, computer services, instruments) and business and professional services.

In effect, though finance, high tech, defense related employment, and construction have lost ground, other major sectors continue to do well, including asset management,

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<sup>1</sup> Francoise Carre, The Economies of the Nation's Largest Cities: Diversity, Confluence, Interdependence, 1969-1984-2000 (Boston: Boston Redevelopment Authority, 1988).





business and professional services, health services and research and the hospitality industry. With a state job loss of 100,000, since 1988, and perhaps another 100,000 before recovery takes off, total job attrition would amount to 5 percent of the Bay State's 3.8 million jobs, with growth forecast to resume in late 1991 or 1992.

Following is a review of the 90s outlook, by principal industries.

Construction employment would rise, in the 90s, with no increase in share of total jobs, as the lead role of the pipeline of public infrastructure investment and higher education and medical institution development projects is complemented, beginning in 1992, with a modest revival of commercial and residential building. Commercial development will be constrained by the growth in services productivity, with a larger rise in output than in employment and space requirements. Residential development, on the other hand, will respond to the projected growth in population in Boston and the Commonwealth.

Manufacturing employment is projected to increase modestly in Boston, the metro region and the state, with the role of new technology industry, while continuing to lose in share of total employment. Though further declines may be in store for low technology manufacturing, high technology industry is expected to revive, and defense related firms are forecast to succeed well in conversion to non-defense related activities. A just released Bank of Boston report, entitled Survey of New England Defense Contractors, found that defense contractors are taking aggressive action to cope with the changing environment, and that, unlike earlier defense downturns, companies are optimistic about their future. New strategies include new products and stronger marketing.

Employment shares in finance are expected to hold. Boston's securities activities center principally in asset management, rather than brokerage, as is the case in New York. Asset management is doing well. Banking and real estate are projected to revive from their 1988-91





slump.

Employment shares in services activities are projected to rise, from 32 to 34 percent of employment in the state, in 1988 and the year 2000, respectively, from 34 to 37 percent, in the metro region, and from 41 percent to 43 percent, in Boston. In Boston, for example, shares of total employment are projected to rise from 11.7 percent to 13.1 percent in health services and research, from 15.4 percent to 16.6 percent, in business and professional services, and from 1.9 percent to 2.1 percent in the hospitality industry.

These sectors, with growth in employment shares, would compensate for declining shares (with rising employment) in activities with lesser productivity growth, - wholesale and retail trade, transportation and communication, and government.

Overall, job growth, in the 1988-2000 period, would total 564,000, for the State, 398,000 for the metro region, and 103,000, for Boston, in comparison with 1976-88 gains of 1,061,011, for Massachusetts, 752,530 for the metro region, and 117,086 for Boston.



## II. Labor Force Upgrading

Improvement of the quality of the labor force, - in Boston, in the metro region, and the State -, facilitated the upgrading of the economic structure in the 80s. For the future, looking to the year 2000, further gains in labor force quality and productivity will benefit from national demographic trends, and the newly enacted immigration law. Beyond these factors, improvement in urban education quality, and job training, would enhance the potential for broadening opportunity and reducing poverty, however. Making Boston and the Bay State an attractive place to live and work would also be essential to attract and keep the talent which would keep the Boston and Bay State economies at the leading edge.

There was notable quality improvement of the labor force in Boston, the Metro Region, and the State in the 80s.

In Boston, the share of the labor force in professional, technical, and managerial occupations rose from 23 percent, in 1970, to 30, percent, in 1980, and 36 percent, in 1985. See Table 1.

The Boston Metro Area led the Nation's 30 largest metro areas in the education attainment level of the labor force. The U.S. Census Bureau Current Population Survey for the month of March, in 1987, 1988, and 1989, reported that, for the average of these years, the Boston Metro Area was highest, with 36 percent of the labor force having 16 or more years of schooling. Boston was followed by 27 percent, for New York, 24 percent for Minneapolis-St.Paul, 23 percent for the 30 largest metro areas, and 20 percent for the Nation as a whole. See Table 2.

The upscale achievement of the Massachusetts labor force, as a whole, was also spectacular. The share of the Bay State labor force, in professional, managerial and technical





jobs, rose from 24 percent, in 1970, to 36 percent, in 1989. See Table 3.

Among the Nation's states, Massachusetts leads in the professionalization of the labor force. See Table 4.

For the future, the Massachusetts Department of Employment and Training reported, in 1987, that future job growth, looking to the year 2000, would build on continuing professionalization, with a projected overall job growth of 500,000, (+16 percent), requirements for professional, managerial and technical occupations would rise by 24 percent, and account for 48 percent of the total. See Table 5.

National demographic trends are expected to engender broad improvement in labor force quality and in productivity in the 1990s. According to reports of the U.S. Department of Labor based on a study by the Hudson Institute the 90s will be an era of slowdown in the growth of the labor force as the Nation enters the baby bust era.<sup>3</sup> Knowledgeable observers (including Rosemary Scanlon, Chief Economist, Port Authority of New York) forecast the economy will accommodate to this circumstance through job restructuring, automation, and employer initiatives in job training and education. Also advancing quality and productivity is the concept that, with a smaller flow of new entrants, an older and more experienced labor force will be more productive.

The projected rationalization of services activities is also expected to improve labor force quality and productivity. An analysis presented by Dean Lester Thurow noted the decline in the rate of productivity growth in the United States in the 1970s and 1980s; great strides in rising manufacturing productivity were swamped by little or no productivity gain in services, which

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<sup>3</sup> U.S. Department of Labor, Monthly Labor Review, November 1989; William B. Johnson, Workforce 2000: Work and Workers for the 21st Century (Indianapolis: Hudson Institute, 1987).





had absorbed the major share of the increment in the baby boom labor force.<sup>4</sup> In the 90s, services output is expected to grow with a less than commensurate increase in labor force, whose scarcity will be compensated by restructuring of occupations, automation, and better education and job training. Services oriented economies, those of Boston and the Bay State, in particular, will be among the principal beneficiaries.

Another potential area of labor force quality enhancement centers in improvement of education and job training of youth, women, and minorities.

Of prime importance would be the continued flow of college students to the Bay State, from all over the Nation and the World, and their desire to live and work here on graduation. This important facet of the Bay State's human resource capital must be husbanded through measures to maintain the attractiveness of the Commonwealth's environment for living and working.

A newly enacted immigration law (October 1990) provides for 600,000 additional immigrants annually. Those with job skills needed in the U.S. economy are among those who will be favored. In addition, there is provision for the legalization of 16,000 skilled immigrant workers, without legal status, including concentrations in the Bay State.

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<sup>4</sup> Economic Policy Roundtable Conference: Shaping a Vision for Urban America, Richard Henderson and Lawrence Kennedy, eds., (Boston: Boston Redevelopment Authority, 1988).



TABLE 1.

Occupations Of Employed Boston Residents, 16 Years and Over,  
1985, 1980 and 1970  
(In Percent)

	1985	1980	1970
Professional, Technical & Managerial	36	30	23
Sales	7	3	6
Office Support	15	26	27
Secretarial	5	#	#
Crafts and Mechanical	8	8	10
Operatives	10	11	14
Laborers	2	3	4
Cleaning & Food Service	10	#	#
Health Services	4	#	#
Miscellaneous Services	4	20	17
TOTAL	100	100	100

# In 1980 and 1970, secretaries were classified as office support staff and all service workers were considered in one category.

SOURCES: U.S. Bureau of the Census, 1970 Census of Population.  
Boston Redevelopment Authority Household Survey, conducted by  
The Center For Survey Research, 1980.  
Boston Redevelopment Authority and Neighborhood Development  
and Employment Agency Household Survey, conducted by the Center For Survey Research, 1985.





**TABLE 2.**

The Boston Metro Area is ahead in the education of the Labor Force; Educational attainment of the 20-34 year olds, U.S., Boston, Minneapolis/St. Paul, New York and the other 30 largest metro areas, average of March 1987, 1988, and 1989

	<u>16+ Years</u> (Percent of Total)
U.S.	19.8%
Boston	36.0%
Minneapolis/St. Paul	23.6%
New York	26.8%
All Other 30 Largest Metro Areas	23.4%

**Source:** U.S. Bureau of the Census, Current Population Survey

**TABLE 3.**

Improvement of the quality of the Labor Force supported the betterment of the economic base; the Bay State labor force became more professional, with a rising share holding professional, managerial, and technical jobs.

1970	24.2%
1976	28.6
1980	30.2
1983	30.3
1986	32.8
1989	35.7

**Source:** U.S. Census 1970, U.S. Bureau of Labor Statistics, Profile of Employment





**TABLE 4.**

Massachusetts leads the nation in the professionalization of the Labor Force, in the share holding professional, managerial, and technical jobs, 1989.

U.S.	29.0%
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Top Six

Massachusetts	35.7
Maryland	35.1
Alaska	34.4
New Jersey	33.8
Connecticut	33.2
Virginia	32.8

Bottom Six

Mississippi	24.2
South Carolina	24.1
Alabama	24.0
Indiana	22.4
West Virginia	21.6
Arkansas	21.5

**Source:** U.S. Bureau of the Census, Current Population Survey

**TABLE 5**

Future job growth in Massachusetts will build on continuing professionalization; Projected increase in employment of Massachusetts workers, by major occupational group, 1987-2000

<u>Occupations</u>	<u>Absolute Increase</u>	<u>Percent Growth</u>
All	500,950	15.6
Professional, Managerial, & Technical	242,340	24.3

**Source:** Massachusetts Department of Employment and Training

